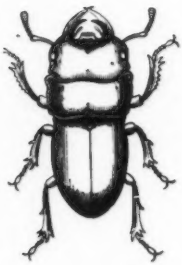
THADDEUS WILLIAM HARRIS, M.D.

# Entomological News



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# ENTOMOLOGICAL NEWS

AND

## PROCEEDINGS OF THE ENTOMOLOGICAL SECTION,

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

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## THADDEUS WILLIAM HARRIS, M.D.

This month we present our readers with a picture of one of the greatest entomologists America has produced. We suppose but few of our readers have already seen a picture of Dr. Harris and that is our reason for publishing it. He was born in Dorchester, Mass., Nov. 12, 1795, and died on Jan. 16, 1856, at the age of sixty. Dr. Harris graduated from Harvard College in 1815, and took the degree of M.D. in 1820. He published about one hundred and fourteen papers on entomological subjects, but his principal work was "Insects Injurious to Vegetation," which is a classic, and also of value to the present day; and it is doubtful whether the beginner can have any better general work on entomology than the Flint edition of this book. It is not our purpose to say much about Dr. Harris, as this has already been ably done; we merely present his likeness to those who have not seen it.

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DURING one of my last collecting trips in September (Queens County, N. Y.) I found on sprouts of white birch, all from one root and not over thirty inches high, thirty-eight larvæ of *Paonius excæcatus*. Usually this species does not oviposit more than three or four ova on one bush.—Dr. R. E. KUNZE.

## THE RED BUG.

By JOHN HAMILTON, M.D.

*Trombidium* (*Leptus*) *irritans* Riley.—This, for the information of the unitiated, is not a beetle, nor a butterfly; in fact, judging from its size, it is, so to speak, not much of anything. It is said to be the larva of some species of *Trombidium*—of which is yet unknown; it is scarlet red, about the size of a pin point, say the one thousandeth part of an inch in length and has six legs (for its figure see Riley's Missouri Reports, vi, p. 122). A small thing, but mighty; a torturer—a murderer of sleep—the tormenter of entomologists, botanists and others who encroach on its domains; not that it bites or stings—it does neither; worse than either, it just tickles. In olden times, when torturing was in vogue, the very acme of human suffering is said to have been induced by a tickling machine, some of which seem to be yet extant in some museum collections of such implements.

It is thought to be a vegetarian, inhabiting the coarse grasses growing along ditches and low grounds. Its mode of action is about this: it gets on the clothing, perhaps by accident, and from its minuteness, readily passes through garments, even of the finest texture, till it reaches the skin, over which it crawls till it comes to one of the larger sweat tubes or pores; say, one six hundred and seventieth of an inch in diameter, and not knowing what kind of territory it has traveled to, it starts down on a tour of investigation; as the tube is very tortuous and scarcely longer than the Red Bug (by which name it is universally known) its progress is necessarily slow, requiring from about 18 to 36 hours to reach the end of the tube which is closed, and which becomes its tomb. The victim is not aware of what is in store till disrobing for the night, when, if there has been no former experience, there is suddenly developed a bad case of hives, nettlerash, urticaria, all blamed on the oyster, fish and pastry diet of the hotel; a rigid course of dieting and medication is instituted next day, the young hotel doctor always, to his great gain and reputation, confirming the diagnosis of the sufferer. The phenomena following its entrance into the tube is about this: a large circular elevation similar to that in nettlerash forms in a few hours, which on being exposed to the air by dissolving becomes intensely itchy; don't scratch; if you do, you are undone,

the more you scratch the more you want to. In about thirty-six hours a little blister appears, succeeded by a scab the size of a split pea, the irritation gradually subsides, the scale falls in about six weeks leaving a deep and permanent pit as in small-pox.

Such is the usual course, but there are some more serious records. A Georgia newspaper gives an account of a death from blood poisoning caused by this Red Bug. Medical journals contain notices of erysipelas of the lower extremities from the same cause, and the writer knows of a certain gentleman, who shall be nameless, who lay last Spring near two weeks in a Florida hotel with his lower limbs soaked with tannin in glycerin and done up in iodoform. Entire or comparative immunity from the Red Bug is enjoyed by many of the long-time residents of southern Florida, why, has not been ascertained absolutely, but as they seldom acquire flesh, and their skin become swarthy with a leathery appearance, it may be that the larger sweat tubes contract too greatly to admit of its entrance.

As palliatives of the horrible itchiness, camphor, ammonia, Pond's extract, etc., are used with more or less success. If taken in time the bug can be killed and the itch arrested. According to an old gardener a good lathering with a strong soap before retiring does the business, if used in the evening of the day of infection, it being his opinion that the soap closes the pores and smothers the bug before it has done much mischief. An effectual mode of abortion if done in time, as the writer has witnessed, is a good sponging with a solution of carbolic acid, one ounce in a quart of water, after a good soap bath.

The Red Bug is known from Florida to Texas, and northward to Missouri and along the Atlantic coast to New Jersey, though I never met with it there. My friend, Rev. Prof. Jerome Schmitt, had a little engagement with it in southern Missouri. Mr. H. F. Wickham felt one or two in Texas. It seems to have entirely neglected Mrs. Annie Trumbull Slosson, as she does not mention it, an omission highly improbable, as she always speaks in an inimitable way of the many curious incidents attending her entomological tours. Had she had an encounter with the aggressive Red Bug, the narrative would doubtlessly have been in sportive iambics or tragic verse, probably the latter.

## NOTES ON EUROPEAN ENTOMOLOGICAL COLLECTIONS.

By PHILIP P. CALVERT, Ph.D.

It having been suggested that readers of the NEWS would be interested to know something of European entomological museums, the opportunities which the writer has enjoyed of personally examining some of these have been availed of to gather some data of a general character which are here presented.

### I.—THE BRITISH MUSEUM.

The Natural History collections of the British Museum were formerly also contained in the classical building on Great Russell St., Bloomsbury, London, W. C., which is now devoted to art and literature. They were removed to the present handsome Natural History Museum, Cromwell Road, South Kensington, London, S. W., rather more than a decade ago, under the directorship of Prof. (Sir) Richard Owen. The present director is Sir William Henry Flower.

While the Insects are represented in the show collections open to the public by specimens selected to illustrate their anatomy, development, habits, classification and such special subjects as mimicry and melanism, the valuable material "for students only" is to be found in the Department of Insects, lodged in the basement in a continuous series of rooms between the front wall and a corridor parallel thereto. Light is afforded by the windows facing Cromwell Road, having a southern exposure; before these are the tables for the use of the Museum entomologists and students. The cases containing the collections are in that part of each room which lies next to the corridor, and are not so well lighted as one could wish, since the only source of light is the above-mentioned row of windows at the other end of the rooms. The specimens are preserved in drawers with glass tops, enclosed in cases with solid doors.

The staff of the Museum at the present time includes the following entomologists, well known by name to the readers of the department of Entomological Literature of this journal: Messrs. A. G. Butler (Assistant Keeper), C. O. Waterhouse (in charge of the Department of Insects), E. E. Austen, C. J. Gahan, G. H. Hampson, F. A. Heron, W. F. Kirby and R. I. Pocock. There are also four boy attendants. While the Department can

not and does not undertake to identify insects for those who might desire such a favor, it will answer inquiries addressed to it as to whether specimens sent are or are not of such and such a given species, the type or types of which are presumably in the British Museum collections.

Thanks to the kindness of a friend, the following list mentions some of the more important contents of these collections.

## GENERAL.

The original Museum collection quoted by Fabricius more than a hundred years ago.

Sir Joseph Banks' collection of about the same date, kept as a separate collection in Fabrician order.

Dr. Leach's collection.

Hope, Rev. F. W. Types of species described in Gray's Zoological Miscellany.

Curtis, J. Types of species collected by Capt. King, in South America.

Kirby, Rev. W. Types of his "Century of Insects" and of North American species.

Stephens, J. F. His entire collection (British).

Gray, G. R. Most of the species described in Griffith's "Animal Kingdom."

Newman, E. A considerable number of types of N. American and Australian species.

Walker, F. All those described in the Museum Catalogue.

## COLEOPTERA.

Laferté. A first selection of his Lamellicorns (4000), including types from Reiche's collection.

Clark, Rev. H. Entire collection of Hydradephaga and Phytophaga.

Bowring, J. C. Entire collection, 230,000 specimens, including Chevrolat's Longicornia intact, Jekel's Rhynchophora and Tatam's Geodephaga.

Saunders, E. Buprestidæ entire, 7200 specimens.

Bates, F. Heteromera entire, 22,000 specimens.

Wollaston, T. V. His collections from the Canaries, Madeira, Cape Verde Is., St. Helena.

Murray, A. Nitidulidæ, and a considerable portion of his Old Calabar collection.

Baly, J. S. Phytophaga entire, except Cassidæ.

Crotch, G. R. A collection made in the Azores by F. Ducane Godman and named by Crotch.

Blackburn, Rev. T. Collection made in the Hawaiian islands.

Waterhouse, G. R. Nearly all his types.

Pascoe, F. P. Entire collection, about 3000 types, 48,000 specimens.

Godman & Salvin. "Biologia Centrali-Americana." As the different portions of this work have been completed, Messrs. Godman & Salvin have presented to the Museum the specimens referred to; so far 61,800 specimens have been received, including the

Geodephaga described by H. W. Bates.
Lamellicornia and Pectinicornia described by H. W. Bates.
Buprestidæ described by C. O. Waterhouse.
Eucnemidæ described by Dr. G. H. Horn.
Heteromera described by G. C. Champion.
Bruchidæ described by Dr. D. Sharp.
Phytophaga described by M. Jacoby.
Longicornia described by H. W. Bates and C. J. Gahan.

Parry, Major. Portions of his Lucanidæ.

Gorham, Rev. H. S. Endomychidæ.

Wallace, A. R. Portions of his Cetoniidæ, Euryomia, etc.

Walker, F. Numerous types of Ceylonese species, and species from Vancouver.

## NEUROPTERA.

Hagen, H. A. Types of Termites collected by Bates on the Amazons.

Pictet, F. A series of typical Phryganids.

## HYMENOPTERA.

Kirby, Rev. W. Bees described in his "Apium Angliæ."

Smith, F. A first selection from his collection of exotics, including many types described by de Saussure.

Devignes. British Ichneumonidæ.

LEPIDOPTERA.

Haworth. Types of his "Lepidoptera Britannica."

Stainton, H. T. Entire collection, 27,300 specimens.

Hewitson, W. C. Entire collection of exotic butterflies, 24,600 specimens.

Moore, F. Collection of Indian Lepidoptera.

Frey. European collection, 18,000 specimens.

Zeller. European collection, 31,000 specimens.

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The writer would feel that he were lacking in courtesy were he to omit to record his grateful appreciation of the fact—an important one in this connection—of his being received here and elsewhere in entomological circles in London with the greatest kindness, and afforded the opportunities of examining such insects and books as he desired for his studies. Nay further, his experience in Europe generally has been of such a pleasant character as to lead him to state that the American entomologist has nothing but a kindly welcome to expect from his European co-laborers.

BERLIN, Oct. 26, 1895.

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## Notes on the Noctuidæ Described by Guenée in the Saunder's Collection.

By WILLIAM SCHAUS.

While working at Walker's American types in the Oxford Museum I have come across the species described by Guenée from the Saunder's collection, and I think the following notes of interest to American Lepidopterists.

*Perigea turpis* Gn., spec. gen., Noct. i, 232.

This species is a small specimen of *Perigea sutor* Gn., the type of which I have recently examined through the kindness of Mr. Oberthür, and both refer to *P. claufacta* Walk. = *fabrefacta* Morr. The species will stand in North American lists as *P. sutor* Gn.

*Eriopus monetifera* Gn., spec. gen., Noct. ii, 295.

Now placed in the genus *Metathorasa* Moore.

*Ingura lunodes* Gn., spec. gen., Noct. ii, 310.

Correctly identified in collections. The species is widely spread, common in Mexico, and will probably be found in Texas.

*Ingura oculatrix* Gn., spec. gen., Noct. ii, 313.
Correctly identified in collections.

*Diastema tigris* Gn., spec. gen., Noct. ii, 317.
The types are with Mr. Oberthür and at Oxford.

*Gonodonta serix* Gn., spec. gen., Noct. ii, 370.
This is a synonym of *G. pyrgo* Cr.

*Gonodonta holosericea* Gn., sp. gen., Noct. ii, 371.
Correctly identified in most collections.

*Gonodonta sinaldus* Gn., sp. gen., Noct. ii, 372.
A well-known species.

*Achantodes cerusicosta* Gn., spec. gen., Noct. ii, 387.
This is a *Pyral*, and is correctly named in the Brit. Museum.

*Anomis grandipuncta* Gn., spec. gen., Noct. ii, 400.
The synonymy of this species is correctly given by Prof. Smith in his catalogue of Noctuidæ, p. 243.

*Cœnipeta lobuligera* Gn., spec. gen., Noct. iii, 32.
The type agrees perfectly with *C. lilacina* Btl., which has been placed in the British Museum as a synonym of *C. serapis* Cr.; this last being the oldest name.

*Stictoptera vitrea* Gn., spec. gen., Noct. iii, 53.
Correctly identified in collections.

*Bolina novanda* Gn., spec. gen., Noct. iii, 64.
*B. lucigera* Wlk., *B. agrotoides* Wlk., *B. evelina* Btl. and *B. agrotipennis* Harvey are synonyms of this species. Prof. Smith, in his catalogue of Noctuidæ, considers *B. agrotipennis* Harvey as a dark form of *B. jucunda* Hübn. I have good series of both species, and have carefully examined the specimens in the British Museum, and believe them to be quite distinct.

*Bolina heliothoides* Gn., spec. gen., Noct. iii, 76.
A synonym of *H. andremona* Cr.

*Peosina saundersii* Gn., spec. gen., Noct. iii, 133.
This is the ♀ of *P. mexicana* Gn., spec. gen., Noct. iii, 132.

*Stonia opistographa* Gn., sp. gen., Noct. iii, 212.
A distinct species, and not a synonym of *S. lignaris* Hübn.

*Ophisma ablunaris* Gn., spec. gen., Noct , iii, 237.
A variable species.

*Athyrma dormitrix* Gn., spec. gen., Noct., iii, 263.
A synonym of *A. adjutrix* Cr.

*Azeta uncas* Gn., spec. gen., Noct., iii, 359.
A variable, but well-known species.

# ENTOMOLOGICAL NEWS.

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PHILADELPHIA, PA., JANUARY, 1896.


WITH this number the NEWS begins another year and another volume, and it has been decided by the joint Publication Committee of the American Entomological Society and the Entomological Section of The Academy of Natural Sciences to so continue it and maintain the same low price, which is about one-third what the publication would cost if the services of those gentlemen devoting their time to it were paid. We think we give more for the money than any kindred journal in the world, and we are willing to continue the good work with a view of advancing the study of entomology. Our monthly edition this year will be six hundred copies. To accommodate those who contribute articles we should have at least fifty pages a month, so that all articles can promptly appear in print. Turn in and help us increase our subscription list and we will give you a fifty-page illustrated monthly journal of entomology that all may be proud of.

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DURING July of 1895, I took on flowers of swamp milkweed, *Asclepias carnosa*, and pasture thistle, two fine *Hemaris thysbe*, var. *uniformis*, in two localities of Westchester County, N. Y. I also received from a collector in Manitoba three specimens of the same variation, which seem to be the prevailing form in that Northern region.—Dr. R. E. KUNZE.

# DEPARTMENT OF ECONOMIC ENTOMOLOGY.

Edited by Prof. JOHN B. SMITH, Sc.D., New Brunswick, N. J.

Papers for this department are solicited. They should be sent to the editor, Prof. John B. Smith, Sc.D., New Brunswick, N. J.

**A Correction.**—The peculiar combination of letters in the title of Mr. Johnson's note in the NEWS for December, page 324, is intended for *Ephestia kuhniella*. I have been afraid to try to pronounce what the letters, as they are printed, actually do spell; but of course the mistake is chargeable against the "devil." The word "sprouts" in the same article should read "spouts."

**Monocrepidius vespertinus Injuring Beans**—In the December number is a short note in the proceedings of the Feldman Collecting Social, made by Mr. Wenzel, to the effect that the above species was found at Dacosta, N. J., feeding on beans in such numbers as to ruin the crop for market purposes. This insect is not usually a very common one in general collecting; but according to Mr. Wenzel's story, corroborated by Mr. Bland, any number of them were to be found in this field of beans. They were feeding upon the pods, nibbling little holes here and there, around which a black spot then made its appearance, causing the beans to become unfit for market. I have never had such a case brought to my attention before, and have never found these insects in any numbers on cultivated land. It seems an exceptional habit; but possibly there may be other records that I have not noticed, and if so, this department of the NEWS would be a good place to call attention to them. I have frequently seen black spots on wax beans, but these have been always due to the "Bean spot," a fungus disease.

**A new way to use Kerosene.**—A few days ago, after lecturing to my class on scale insects and the best methods to be adopted for their destruction, one of the students informed me that he had a very much simpler method of using kerosene than that described by me, and which always proved throroughly successful. According to him, when a tree on his father's farm became scaly, or covered with lichens or other vegetable growth, the trunk was drenched during the Winter with kerosene, to which they then set fire. The kerosene burnt off clean, taking with it scales and all abnormal vegetable growths and leaving it perfectly clean to the sound bark. He assured me that in no case were trees thus treated injured; but also said that it was the trunk and perhaps a few larger branches only that were treated in this way. I happened to have a number of twigs and branches that were badly covered with the Scurfy Scale, in my laboratory, and on two of these I tried the experiment. I dipped the specimens into pure kerosene and almost immediately set them afire, placing them upright on the steam radiator. The kerosene burnt off without

touching the wood, except where it was dry and withered, and on cutting into the bark afterward I found that apparently no injury had been done below the outer surface; in fact, except for the smudgy appearance on the outside of the bark it was entirely normal. As for the scales, they had been burnt away nearly clean; here and there a partial cluster of eggs could be found, and occasionally a fragment of a scale still remained on the surface. Had I allowed the kerosene to penetrate a little before setting it afire, I have no doubt the scales would have been burned away completely. This seems like a very heroic remedy, but after all it may not be as bad as it looks. On living tissue a thin film of kerosene will burn away rapidly without developing heat enough to injure the bark itself, while at the same time it would probably take with it all surface excrescences and attachments like scales. The method is worthy of trial at any rate, and this note is published to induce those who may be in a position to test it, to do so. The tree should be sprayed with pure kerosene through a Vermorel nozzle, and then, after allowing the material to remain, say ten to fifteen minutes, it could be lighted at the bottom. Possibly some of the yet lighter and more inflammable oils might also find a use in this way. A sound tree during the Winter season will stand a good deal of application to the outer bark without showing injury. If any experiments are made in this direction I would be obliged to hear of the results through this department of the NEWS.

**Scolytus 4-spinosus.**—The article in the November number of ENTOMOLOGICAL NEWS on *Scolytus 4-spinosus* Say, was of special interest to me.

There are three species of the genus found near Crafton, Allegheny County, Pa., namely *4-spinosus* Say, *muticus* Say, and *rugulosus* Ratz. The injury done by the former and latter of these species in this locality is such as to warrant the belief that unless some practical and efficient method for checking their ravages is adopted, that it will not be long before the several varieties of hickory about here, as well as certain kinds of fruit trees in young orchards, will be extirpated.

In this locality hickory is not very abundant; just one here and there as it were. In March, 1894, I selected several trees conveniently located, and deadened a greater or less portion of each for the purpose of rearing insects. Among the trees was a large hickory, the upper twenty feet or so being deadened, but not cut down till about the first of April of this year, when I placed it in tight barrels with a piece of muslin serving as the top, it being held down by the hoops. For more accurate observation I placed the twigs, large branches and trunk in separate barrels, which afterwards proved of some significance—more particularly with other kinds of wood, such as ash and butternut, in which it is even advisable to separate the trunk where the rough bark ends and the smooth bark begins. It might be well to state that none of the wood has ever been moistened since being barreled, or rather since being taken in.

I do not intend to enumerate the various species so far emerged, but

will confine myself to *Scolytus*, two species of which were reared from this tree, principally from the trunk. They were *S. 4-spinosus* and *S. rugulosus*, there being but a few of the latter. As to the former species, a detailed account is appended showing when and how many emerged.

My own observations go to show that trees in full health and vigor are not so liable to be attacked by *Scolytus*. I do not mean to imply that it is always necessary for some other insect to start the work of destruction, but on the contrary the effects of a severe drought is sufficient excuse for these beetles to start their work on any trees that may have suffered from the lack of water.

The Summer of 1894 witnessed a severe drought in this locality; a few of our trees began to wither, and three of these were then attacked by *Scolytus*, who hastily completed the deadly work by eating holes in the bark, apparently for no other purpose but food. One of these trees was wild cherry, it being killed by *S. rugulosus;* the other two were "Black Tartarian" cherries, and were killed by *S. 4-spinosus*.

*Scolytus muticus* does not seem to be a pest here; I have found it very rare, save on the occasion of which I shall now speak. On the fifth of August, 1895, I ran across a tree which had been burned in the early part of the previous year. The fire had charred it to a considerable height, and upon examination I found that it contained a number of living inhabitants, among them being the larvæ and imago of *S. muticus*. Being in need of the latter I sawed off one of the main lower branches and barreled it. The following list gives the dates of the emergence of the specimens:

*Scolytus 4-spinosus*. Raised from hickory.

| | | |
|---|---|---|
| May 26— 1 | June 7— 2 | June 17—6 |
| " 29— 2 | " 8— 3 | " 18—2 |
| " 30— 8 | " 9—11 | " 19—8 |
| " 31— 3 | " 10—10 | " 20—5 |
| June 1—10 | " 11—15 | " 21—1 |
| " 2— 8 | " 12—14 | " 22—7 |
| " 3— 9 | " 13— 5 | " 26—3 |
| " 4—12 | " 14— 8 | " 28—1 |
| " 5— 1 | " 16—12 | July 20—1 |

*Scolytus muticus*. Raised from burnt tree.

| | | |
|---|---|---|
| Aug. 6—10 | Aug. 13—12 | Sept. 3—6 |
| " 7—50 | " 14— 9 | " 4—3 |
| " 8—25 | " 15— 8 | " 5—2 |
| " 9—20 | " 16— 3 | " 6—2 |
| " 10—14 | " 17— 4 | " 7—3 |
| " 11—15 | " 18— 2 | " 9—2 |
| " 12—12 | " 31— 2 | " 10—4 |

EDWARD A. KLAGES.

**Lixus concavus** *Say*, **as an Injurious Insect.**—In Allegheny County, Pa., the natural food-plant of this beetle is the common Burdock, the insect breeding in the stem of the plant. It is indeed unfortunate that this species is rapidly acquiring a decided taste for Rhubarb, upon which it already depredates to a considerable extent. These beetles being of some size and quite sluggish in movement may be readily picked by hand; they occur from early Spring until late in Fall, being more abundant about the first of June. EDWARD A. KLAGES.

Mr. Klages' communication on the *Lixus* is interesting. This particular species is a common eastern form, and is numerous on the Rhubarb in New Jersey; yet it rarely does any severe injury, because the growers find it profitable to keep the plants trimmed up in good shape, and to use up the leaves about as fast as they mature. Most of them have learned, by practical experience, that it does not pay to allow them to rot on the plants and therefore except in an abandoned patch here and there, the leaves are generally found to be in good condition. This is not an insect that need be much feared, provided reasonable care is exercised in keeping down those leaves in which the larvæ can develop. Although the beetles are not active, yet they frequently evade capture by dropping to the ground when disturbed, and when this is among grass they are not easily found unless the place where they dropped is carefully noted.

# Notes and News.

## ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

[The Conductors of ENTOMOLOGICAL NEWS solicit, and will thankfully receive items of news, likely to interest its readers, from any source. The author's name will be given in each case for the information of cataloguers and bibliographers.]

**To Contributors.**—All contributions will be considered and passed upon at our earliest convenience, and as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for certain issue. Twenty-five "extras" without change in form will be given free when they are wanted, and this should be so stated on the MS. along with the number desired. The receipt of all papers will be acknowledged.—ED.

THE staff of the Deparment of Insects of the U. S. National Museum has been reorganized as a result of the sad death of the former Honorary Curator, Professor C. V. Riley.

The reorganization has been effected by the appointment of Mr. L. O. Howard, Entomologist of the U. S. Department of Agriculture, to the position of Honorary Curator of the Department of Insects; of Mr. Wm. H. Ashmead to the position of Custodian of Hymenoptera; and Mr. D. W. Coquillett to the position of Custodian of Diptera. All museum custodians are honorary officers. Mr. M. L. Linell will remain as general assistant to the Honorary Curator.

The Department is at present in excellent condition. It contains a very great amount of material in all orders, and in many directions surpasses any collection in the country. Among others the following are of especial interest:

The large collection, in all orders, of the late Dr. C. V. Riley. All of the material gathered during the past eighteen years by correspondents, field agents, and the office staff of the Division of Entomology, U. S. Department of Agriculture. Part of the collection of the late Asa Fitch. The large collection, in all orders, of the late G. W. Belfrage. The collections in Lepidoptera and Coleoptera made by Dr. John B. Smith down to 1889, together with the types of the Noctuidæ since described by Dr. Smith. The collection of Lepidoptera of the late O. Meeske. The collection of Lepidoptera of G. Boyer. The collection of Coleoptera of M. L. Linell. A part of the collection, in all orders, of the late H. K. Morrison. The collection of Diptera of the late Edward Burgess. The type collection of Syrphidæ made by Dr. S. W. Williston. The collection of Ixodidæ of the late George Marx. The collection of Myriapoda of the late C. H. Bollman. Sets of the neo-tropical collections of Herbert Smith. The collection of Hymenoptera of Wm. J. Fox. The collection of Tineina of Wm. Beutenmüller. The large Japanese collection, in all orders, of Dr. K. Mitsurkuri. The African collections, in all orders, of Dr. W. L. Abbott, Wm. Astor Chanler, J. F. Brady, the last "Eclipse" expedition to West Africa, and of several missionaries. The large collection from South California of D. W. Coquillett, in Coleoptera, Hymenoptera, Lepidoptera and Orthoptera. The Townend Glover manuscripts and plates. In addition to this material there are minor collections which have been the result of the work of government expeditions, or are gifts from United States Consuls and many private individuals.

This enormous mass of material is being cared for by the active and honorary force of the Department, and the perpetuity of the collection is assured. The National Museum building is fire-proof, and this, together with the fact that it is a national institution, renders the Department of Insects a good place for the permanent deposit of types by working specialists in entomology. The policy of the Museum at large, with regard to the use of its collections by students is a broad and liberal one. Students are welcome in all departments, and every facility is given to systematists of recognized standing.—L. O. HOWARD.

IN the Century Dictionary, under *Chrysops*, there is an error that would be misleading to any one not familiar with Diptera. Three figures are given with the following explanation: "1, Female of common cleg (*Chrysops cœcutiens*); 2 and 3, other species of same genus (all natural size)." Now, number 1 is not *C. cœcutiens*, but a *Hæmatopota*, probably *H. pluvialis*, a species almost identical with our *H. americana*. Number 2 is *C. cœcutiens*, and number 3 is *Tabanus bovinus*. All are European species. The figures are good and readily referable to the above species which I have in my collection. There is also a statement in the generic

definition that has probably been derived from the description of the larvæ of the genus *Chrysopa*, viz., "Their larvæ are useful in destroying plant-lice." Although little is known of the larvæ of the genus *Chrysops*, it is certain that this statement is incorrect. Like other members of the family Tabanidæ they are carnivorous, and live in damp earth. The larvæ of many of the Tabanids are subaquatic.—C. W. JOHNSON.

FOOD-PLANT AND LARVA OF NATHALIS IOLE Bdv.—In Mr. Osborn's interesting notes of the Rhopalocera of Tennessee, he writes of *N. iole*, "food-plant unknown." Permit me to give this information: The eggs are laid on the "Fetid Marigold," *Dysodea chrysanthemoides* Lag., a very ill-scented annual with yellow flowers. The eggs hatch in three days (the quickest of any butterfly eggs I am acquainted with); they are tall and slender like the eggs of *Colias*, but smoother. The mature larva is shaped like that of *oleracea*, but has two bristle tipped projections in front of second segment, the surface of body is also covered with stiff hairs arising from pale green tubercles, color of head and body dark green, with broad, purple-black dorsal stripe, and two fine lines of yellow and black along the spiracles; duration of larval period ten to thirteen days; the pupa is .38 in. long, slender, the abdomen tapering, head-case produced, rounded bluntly at top, and rounded at sides; mesonotum rather prominent, the top narrow, but not carinated; color of dorsum and all the abdomen yellowish green, dotted thickly with yellow-white, ventral sides of wing-cases dark green; duration of pupa stage six to eight days. In Colorado there are several broods in the year, the last hibernating in pupa state, but frequently the frosts in September will destroy the plants and whole colonies of half-grown larvæ, and the insect is not seen in the same locality again for a year or two.—DAVID BRUCE.

*Thecla sheridanii* Edw.—This pretty species was first taken in Montana, near the Yellowstone, and described by Mr. Edwards in "Field and Forest" in 1877. I believe the type remained unique until 1890, when I turned up a few examples near Palmer Lake, Colorado. I have taken one or two specimens every year since. I also detected it in a small collection made near Denver by my friend, Mr. E. Oslar, of Colorado Springs, and Prof. Gillette has met with it near Fort Collins. It is a small species, dark grayish brown on upper sides, the under sides of all wings a dark, yet rich green, with a very distinct common white line cut into spots by the veins and edged inwardly with black; it occurs in April and July, and frequents low flowers in grassy slopes and meadows. Mr. Strecker, in his "Synonymic List," has devoted twelve lines to an amusing critique of the trivial name of this insect, which, however, he failed to spell correctly.—DAVID BRUCE.

I WOULD like to ask two questions to be answered through subscribers to the ENT. NEWS: What is the best way to kill and preserve Coleoptera and to pack them away for mailing without mounting them? What is the best and surest remedy for snake and spider bites and for scorpion stings, that can be carried along on a collecting trip?—G. R. PILATE, Tifton, Ga.

## LUTHER'S SADDEST EXPERIENCE.

Luther, he was persecuted,
Excommunicaied, hooted,
Disappointed—egged, and booted;
Yelled at by minutest boys,
Waked up by nocturnal noise,
Scratched and torn by fiendish cats,
Highwayed by voracious rats.

Oft upon his locks so hoary
Water fell from upper story;
Oft a turnip or potato
Struck upon his back or pate, Oh!
And wherever he betook him,
A paper bull was sure to hook him.

But the saddest of all
I am forced to relate;
Of a diet of worms
He was forced to partake,—
Of a *diet of worms*
For the Protestants' sake;
Munching crawling caterpillars,
Beetles mixed with moths and millers;
Instead of butter, on his bread
A sauce of butterflies was spread.
Was not this a horrid feast
For a Christian and a priest?

Now if you do not credit me,
Consult D'Aubigne's history.
You'll find what I have told you
Most fearfully and sternly true.

NOTE.—The above stanzas appeared in the "Yale Literary Magazine" in or near the year 1852, from the pen, I believe, of a student. This transcript from memory is believed to be nearly accurate.

J. M. WHITON.

The following lines "to a spider which inhabited a cell," are from the *Anthologia Borealis et Australis:*

In this wild, groping, dark, and drearie cove,
Of wife, of children, and of health bereft,
I hailed thee, friendly Spider, who hadst wove
Thy mazy net on yonder mouldering raft:
Would that the cleanlie housemaid's foot had left
Thee tarrying here, nor took thy life away;
For thou, from out this seare old ceiling's cleft,
Came down each morn to hede my plaintive lay;
Joying like me to heare sweete musick play,
Wherewith I'd fein beguile the dull, dark, lingering day.

*Cowan's Curious Facts.*

## Identification of Insects (Imagos) for Subscribers.

Specimens will be named under the following conditions: 1st, The number of species to be **limited to twenty-five** for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a 2 cent stamp with all insects for return of names. Before sending insects for identification, read page 41, Vol. III. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

## Entomological Literature.

Under the above head it is intended to note such papers received at the Academy of Natural Sciences of Philadelphia pertaining to the Entomology of the Americas (North and South). Articles irrelevant to American entomology, unless monographs, or containing descriptions of new genera, will not be noted. Contributions to the anatomy of insects, however, whether relating to American or exotic species will be recorded.

1. LE NATURALISTE CANADIEN, xxii, 10.—The last descriptions of L'Abbe Provancher (cont.). Ibid, xxii.—Continuation of same artitle.

2. THE OTTAWA NATURALIST, ix, 8.—*Pamphila peckius*, J. F. *Sphinx luscitiosa*, J. F.

3. ZOOLOGISCHER JAHRBÜCHER (Abtheilung für Systematik, Geographie und Biologie der Thiere), viii, Heft 5.—New experiments on the seasonal dimorphism of butterflies, A. Weismann. The genus *Dorylus* Fabr. and the systematic classification of the Formicidæ, C. Emery. Orthoptera of Paraguay collected by Dr. J. Bohls, E. Giglio Tos.

4. JENAISCHE ZEITSCHRIFT FUR NATURWISSENSCHAFT. HERAUSGEGEBEN VON DER MEDISINISCH-NATURWISSENSCHAFTLICHEN GESELLSCHAFT ZU JENA, xxx, Heft 1.—The development of the spinning apparatus in *Trochosa singoriensis* Laxm., with regard to the abdominal appendages and the wings in insects, A. Jaworowski.

5. SCIENCE, New Series, ii, No. 46.—Katydid orchestration, E. Coues and A. P. Bostwick.

6. PROCEEDINGS AND TRANSACTIONS OF THE NOVA SCOTJAN INSTITUTE OF SCIENCE. Halifax, vol. viii, pt. 4.—Notes on Nova Scotian Zoology, No. 3 [note on *Achela abbreviata*], H. Piers.

7. TEXAS AGRICULTURAL EXPERIMENT STATION, Bulletin No. 36.—Insect enemies of the sweet-potato, R. H. Price. Insecticides, ibid.

8. ENTOMOLOGISCHE NACHRICHTEN, JAHRGANG, xxi, Heft 20.—Ethiopian Rhopalocera ii (conclusion), F. Karsch.——Ibid. Heft 21.—Review

of the species of toe Coleopterous genus *Necrophorus* Fabr. of the palæarctic fauna, E. Reitter.

9. JOURNAL OF THE NEW YORK ENTOMOLOGICAL SOCIETY, September, 1895.—New genera and species of the Tachinidæ, D. W. Coquillett. New North American Tettiginæ, ii, A. P. Morse. The eversible repugnatorial scent glands of insects, A. S. Packard. Some Acarians from a sphagnum swamp, N. Banks. Larva of *Demas propinquilinea;* its systematic position, H. G. Dyar. Note on the Smerinthinæ, A. R. Grote. On the correlation of habit in Nemoscerous and Brachycerous Diptera between aquatic larvæ and blood-sucking adult females, C. H. T. Townsend. Descriptions of the preparatory stages of *Ennomos Alniaria* (Linn.), W. Beutenmüller. Note on *Hyperchiria io* var. *lilith*, ibid. Insects at Watchogue and Beulah Land, Staten Island, N. Y., W. T. Davis. [Note on] *Thecla acadica*, *Catocala coccinata*, *Phyciodes nycteis* and *Dichelonycha fuscula*, W. B. Proceedings of the New York Entomological Society (May 31 and June 4, 1895).

10. ZOOLOGISCHER ANZEIGER, No. 488.—The coxal gland of *Telyphonus caudatus*, T. Adensamer.

11. RECORDS OF THE AUSTRALIAN MUSEUM, ii, 6 —On a case of presumed protective imitiation, F. A. A. Skuse.

12. REVUE SUISSE DE ZOOLOGIE ET ANNALES DU MUSEE D'HISTOIRE NATURELLE DE GENEVE, Tome iii, fasc. 2.—Revision of the Tribes Panesthini and Epilamprini (Orthoptera of the family Blattidæ), H. de Saussure.

13. PROCEEDINGS OF THE BOSTON SOCIETY OF NATURAL HISTORY, xxvi, pt. 4.—Descriptions of certain Lepidopterous larvæ, H. G. Dyar.

14. THE KANSAS UNIVERSITY QUARTERLY, iv, No. 2.—Two remarkable genera of Diptera, S. W. Williston. On *Toxotrypana* of Gerstaecker, W. A. Snow.

15. Yearbook of the United States Department of Agriculture, 1894.—Some scale insects of the orchard, L. O. Howard. The more important insects injurious to stored grain, F. H. Chittenden. Insecticides [directions for their preparation and use].

16. PSYCHE, a journal of entomology, December, 1895.—On the Ephemeridæ and venation nomenclature, V. L. Kellogg. On the nests and parasites of *Prosopis varifrons* Cresson, A. Davidson. The number of stages in *Apatelodes torrefacta*, H. G. Dyar. *Deidamia inscripta*, C. G. Soule. *Schistocera americana* in New England, F. H. Sprague. Insect collection of the U. S. National Museum. Proceedings of the [Cambridge Entomological] Club. New Homoptera received from the New Mexico Agricultural Experiment Station, i, C. F. Baker. The grape-vine Typhlocybids of the Mesilla Valley, T. D. A. Cockerell and C. P. Gillette. Some new insects, T. D. A. Cockerell.

17. OFVERSIGT AF KONGL. VETENSKAPS-AKADEMIENS FORHANDLINGAR, Stockholm, 1895, No. 7.—Contributions to the knowledge of the insect fauna of the Cameroons, iv.—Catalogue of the Hemiptera gathered by Yngve Sjöstedt in northwest Cameroons, C. J. E. Haglund.

18. MITTHEILUNGEN DER SCHWEIZERISCHEN ENTOMOLOGISCHEN GESELLSCHAFT (Bulletin de la Société Entomologique Suisse), Schaffhausen, ix, pt. 5.—Dr. Standfuss' experiments on the influence of extreme temperatures on butterflies, F. Ris. Continuation of Coleoptera Helvetiæ. ——Ibid., ix, pt. 6.—The Papilionidæ of North America in their relation to those of the Old Worle, H. Christ. Review of the other N. American Diurnals in their relation to those of the Old World, ibid.

19. THE ZOOLOGICAL RECORD, volume the thirty-first, 1894, 8vo. London, 1895.

20. ANNALES DES SCIENCES NATURELLES, ZOOLOGIE, T. xx, Nos. 4-6. —Male genital apparatus of the Hymenoptera (cont.), L. Bordas.

21. LEPIDOPTERA INDICA, F. Moore, part xxiii (deals with part of group Charaxina of the Nymphalinæ).

22. ARCHIVES ITALIENNES DE BIOLOGIE, Turin, xxiv, fasc. 2.—The weight of the cocoons of *Bombyx mori*, from the commencement of their weaving to the birth of the moth, L. Luciana and L. Tarulli. [Brief extract from Atti della R. Accademia dei Georgofili, xviii, fasc. 2, 1895.]

23. THE ENTOMOLOGIST. London, No. 391.—On the vertical distribution of the Rhopalocera of the Alps, W. Harcourt-Bath.

24. THE AMERICAN NATURALIST, December, 1895.—The classification of the Lepidoptera on larval characters, H. G. Dyar. *Stemmatoiulus* as an ordinal type, O. F. Cook.

25. TRANSACTIONS OF THE ROYAL SOCIETY OF CANADA, second series, 1895-96 [Extract]—Presidential Address: Practical Entomology, J. Fletcher.

26. BIOLOGIA CENTRALI-AMERICANA, Zoology, part 124.—Arachnida-Araneidea, pp. 145-160, O. P. Cambridge. Coleoptera, vol. iv, pt. 6, pp. 49-80, pl. 3, D. Sharp. Lepidoptera-Heterocera, vol. ii, pp. 233-248, pls. 61 and 62, H. Druce. Rhyncota-Homoptera, vol. ii, pp. 89-112, pl. 7, W. W. Fowler.

27. Frail Children of the Air: Excursions into the World of Butterflies. By Samuel Hubbard Scudder. Houghton, Mifflin & Co., Boston and New York. Price $1.50. The book is composed of a number of essays on butterflies under many different titles, such as "Butterflies in Disguise; a Study in Mimicry." "Deceptive Devices among Caterpillars." "Butterflies as Botanists." "Butterfly Sounds." "Nests and other Structures

made by Caterpillars." "The Eggs of Butterflies." "How Butterflies pass the Winter." "Aromatic Butterflies." "Antigeny, or Sexual Diversity in Butterflies." "A Budget of Curious Facts about Chrysalids." "Butterflies of the Past, etc." As far as possible these papers have been divested of technical details, and in many cases revised or extended, to bring them up to date. These fragments will show, as well as a more elaborate treatise, that there is much to be learned from the study of the lives and structure of our every-day butterflies as can be gleaned in any other branch of natural history. This is a book that can't fail to interest and instruct students of the Lepidoptera.

## INDEX TO THE PRECEDING LITERATURE.

The number after each author's name in this index refers to the journal, as numbered in the preceding literature, in which that author's paper is published; * denotes that the paper in question contains descriptions of new North American forms.

### THE GENERAL SUBJECT.

Packard 9, Davis 9, Sharp 19.

### MYRIAPODA.

Cook 24.

### ARACHNIDA.

Jaworowski 4, Banks 9*, Adensamer 10, Cambridge 26*.

### ORTHOPTERA.

Giglio-Tos 3, Coues and Bostwick 5, Piers 6, Morse 9*, de Saussure 12*, Sprague 16.

### NEUROPTERA.

Kellogg 16.

### HEMIPTERA.

Baker 16*, Cockerell and Gillette 16*, Cockerell 16*, Haglund 17, Fowler 26*.

### COLEOPTERA.

Reitter 8, W. B, 9, Sharp 26*.

### DIPTERA.

Coquillett 9*, Townsend 9, Williston 14*, Snow 14.

### LEPIDOPTERA.

J. F. 2, Weismann 3, Karsch 8, Dyar 9, 13, 16, 24, Grote 9, Beutenmüller 9 (three), Skuse 11, Soule 16, Ris 18, Christ 18 (two), Moore 21, Luciani and Tarulli 22, Bath 23, Druce 26*, Scudder 27.

### HYMENOPTERA.

Provancher 1* (two), Emery 3, Davidson 16, Cockerell 16*, Bordas 20.

### ECONOMIC ENTOMOLOGY.

Price 7 (two), Howard 15, Chittenden 15, Fletcher 25.

# Doings of Societies.

PHILADELPHIA, Dec. 10, 1895.

A stated meeting of the Feldman Collecting Social was held at the residence of Mr. H. W. Wenzel, 1509 S. 13th Street. Members present: Messrs. Bland, E. Wenzel, Johnson, Castle, Hoyer, H. W. Wenzel, Fox, Schmitz and Boerner. Honorary members: Prof. John B. Smith and Dr. Henry Skinner. Meeting called to order at 9.10 P.M., President Bland presiding. The Committee on Photograph made a final report, the same was accepted, and, upon motion, the committee was discharged. Dr. Skinner called attention to difference of opinion among collectors as to the proper season for collecting *Cychrus*, desiring the members views thereon; the habits of the species were discussed by Messrs. Wenzel, Bland, Johnson, Smith and Fox, the data mentioned ranging from the end of February to the last of October. Mr. H. W. Wenzel exhibited the following species of *Cryptohypnus*, stating that out of fifteen specimens of *Cryptohypnus obliquatulus* collected at Anglesea, N. J., only three specimens had color markings on the elytra, the other being unicolored, he also mentioned that *Cryptohypnus charis* had been taken in numbers below south Camden, N. J., by himself and *Cryptohypnus exiguus* at Westville, N. J., by W. Reineck. All the species mentioned were collected during the month of May.

Dr. Skinner suggested the idea of the Social advocating the adoption, among collectors, of a uniformity in the length of pins, specifying certain lengths for different orders, and after a discussion made the following motion. The F. C. S. advocates among collectors a general uniformity in the length of pins, and recommends 35 millimetres for pins under No. 6 Klaeger in all orders except Orthoptera, Neuroptera and Lepidoptera and for these orders 38 millimetres under No. 6, the motion being seconded by Prof. Smith; it was carried by the members present without dissent.

Mr. Johnson stated that in going over a lot of *Chrysops* recently received from Dr. W. A. Nason, and the material collected in North Carolina and Virginia last June, he found it to be very full on account of the large number of males it contained. The first lot contained eleven specimens, seven species; the second

seven specimens, four species. Osten Sacken, in his Monograph, describes twenty-four species, but of these only five have the description of both sexes; the species are based entirely on the females. As the wing and abdominal markings vary considerably in the two sexes of the same species, it is sometimes quite difficult to determine the males. Of the twenty-two species in his collection, he had the males of twelve. The females are very common during June and July, while the males are rare and usually found on flowers. The specimens taken in North Carolina were caught on the flowers of the "Chinquapin," or dwarf chestnut.

Prof. Smith stated that among the moths collected by Laurent, in Maine last Summer, were two very poor specimens of *Noctua treatii*, which is very rare, of which he knew of but one other specimen which is in the collection of the National Museum.

No further business being presented the meeting adjourned to the annex at 10.45 P.M.

THEO. H. SCHMITZ, *Secretary.*

ENTOMOLOGICAL SECTION OF THE CHICAGO ACADEMY OF SCIENCES.—The regular meeting was held in the Matthew Laflin Memorial Building, Lincoln Park, November 15, at 8 P.M. The Recorder of the Section, Mr. A. J. Snyder, gave an address, illustrated by maps and stereoptican views, entitled "Snap Shots taken by an Entomologist in Utah, Idaho and Yellowstone Park."

## The Entomological Section

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

PROCEEDINGS OF MEETINGS.

The following papers were read and accepted by the Committee for publication in ENTOMOLOGICAL NEWS:

### ON THE NESTING HABITS OF ANTHIDIUM CONSIMILE.

By A. DAVIDSON, M.D., Los Angeles, Cal.

I discovered this bee three years ago, having captured my first specimen in the process of building its nest in the crevice of a rock near this city. Since that time I have gathered numerous specimens of its nest in various parts of San Bernardino and Los

Angeles Counties. These nests are built either in the crotches of the terminal branches of shrubs, as shown in the illustration, or in depressions or angles of stones or boulders lying on the ground. The nests vary in size according to the number of cells; if containing six or seven they may be as large as a walnut; if

FIG. 1. FIG. 2. FIG. 3.

1.—Mass of cells of *A. consimile* Ashm.
2.—*A. consimile* Ashm. on twig.
3.—Cell showing cocoon in situ, with nipple-like projection.

only one, little more than a quarter of an inch long; but all are of the same composition, whether plastered in a crevice of a rock or cunningly perched on a twig. The main mass in which the cells are somewhat irregularly arranged is composed of a tough glue-like substance very copiously intermixed with comparatively large grains of sand.

Each cell when completed is covered over with these sand grains closely cemented over its surface, and the next cells placed alongside and similarly treated until the whole mass which is ultimately neatly rounded off, looks like a fragment of sandstone, or a miniature conglomerate through which the twig had pushed its way. The outside, by exposure becomes almost as brittle as the rock itself, but internally the mass is always soft, though quite tenacious. The grains and stony fragments utilized to build and

cover it externally are those of the immediate neighborhood and may consequently be either sandstone or granite.

The bees make their exit in the first two weeks of June, and very soon after commence the construction of their cells, each nest being, I believe, the product of one bee. The food is the usual pollen-like mass of medium consistency, and I believe it is simply deposited in the cell, as with other members of this family, although in its habit of building this bee forms a strange and unique contrast to its congener, *Anthidium emarginatum*, the life-history of which I have already detailed in these pages.

The larva, when mature spins a cocoon, as shown in the illustration; in form it closely resembles that of *A. emarginatum*, but is thinner, and of a somewhat transparent texture, with a prominent nipple. The cell measures rather more than one-fourth inch long by one-eighth inch wide; the nipple-like projection is one line long and touches the opposite wall of the cell, the larva in consequence not filling the cell. The nipple is, as usual, on the side nearest the outer wall of the nest.

In making its exit the bee has a difficult task to accomplish, and it is not a matter of surprise that it should sometimes be unable to force its way through the tenacious mass of cement.

From the contour of the point of exit I feel assured that the exit is accomplished by the aid of a secretion that softens the cement and allows the bee to force its way out. No fragments were ever found that would indicate that the bees had gnawed their way out, nor does it seem possible that such material could be bitten through by a bee.

The hymenopterous parasites affecting this species are, on account of the usually exposed situation of the nests, probably quite numerous, but so far only four have been discovered. The most common of these is a small bee identified as *Alcidamea producta* Cress., of which seven emerged in one instance from one group of cells. Many of the other parasites were unable to cut their way out, and were discovered dead in situ on breaking open the cell. Of these, *Monodontomerus montivagus* Ashm. is the most common. *Leucospis affinis* Say, was found once. A new species named *Torymus anthidii* Ashm. occupied two cells. Of the last there were twenty in each cell, the larvæ having attacked their host just after the cocoon had been spun.

While collecting at Palm Springs on the Colorado desert in

April, 1893, I gathered a large nest of this bee from one of the desert shrubs; the nest had evidently been constructed the previous season. Some of the occupants found their way out in the following June, and the remaining cells lay unmolested in my cabinet until this Spring, when my curiosity prompted me to examine them. On dissection I found in two of the cells dead, but apparently full-grown, specimens of *Trichodes ornatus* var. *tenellus* with the thin membranous shroud with which the larvæ had surrounded themselves. In two others larvæ were found, one of which was of a dark vermilion hue, and is probably the larva of this *Trichodes;* the other was enclosed in an *Anthidium* cocoon. I put these two larvæ carefully aside, and the bee, which proved to be a typical *A. consimile*, issued in July. The beetle larva is still active and crawling around its prison with apparently no disposition to reveal its identity.

The *Anthidium* last to emerge must have remained in the larval stage for nearly three years, the egg having probably been deposited in the Autumn of 1892, and having remained in my possession since April, 1893. This, although unique in this family, is not the only instance of long continued existence in the larval state; the historic *Osmia* of the British Museum having furnished an example of the same kind.

Instances of bees remaining for more than one season in the larval state are probably not so very rare. It seems reasonable to suppose that those species inhabiting such arid districts as Palm Springs must have some such natural provision to preserve them from extinction, as it frequently happens that in two successive seasons absolutely no rain falls, and food must, of necessity, be very limited.

The beetles found, and the larva still under observation, are probably of the same species, and present the same peculiarity as the bees in question, in that some of them remain for an extended period in the larval state. Of the habits of these beetles (*Trichodes*) I know nothing, although I believe some members of this genus have been found in the nests of bees.

Appended is Mr. Ashmead's description of the two new species:

**Anthidium consimile** Ashm. n. sp.—Female. Length 7 mm. Black, punctate; a line before front ocellus, the clypeus, the anterior orbit widened at clypeus, a small triangular spot on middle of face just below insertion of antennæ, a stripe on posterior orbits, two large spots on an-

terior margin of mesonotum, the anterior margin of tegulæ, a spot on the large dilated scale in front of tegulæ, a spot on the anterior margin of mesopleura, hind margin of axillæ and scutellum, stripe beneath the anterior and middle femora, the tips of all femora, and the anterior face of tibiæ, a spot at base of hind tarsi, the posterior margin of first abdominal segment dilated laterally, bands on margins of segments 2 to 5 interrupted medially, and two spots on the sixth segment, all lemon-yellow. The lateral middle of the yellow abdominal bands are all emarginated by a quadrate or quadrilateral black spot. The hind coxæ beneath are armed with a small whitish spine. Wings hyaline, the marginal cell and the apices broadly fuliginous.

Allied to *A. parvum* and *A. simile* Cr.

**Torymus anthidii** n. sp. ♀.—Length 1.75–2 mm.; ovipositor nearly as long as the abdomen. Dull bronzy green, finely sericeous, the collar anteriorly and beneath bluish. Head and thorax finely shagreened; scape and tibiæ brownish yellow, tarsi whitish, the hind tibiæ, except tips, sometimes embrowned; coxæ and femora metallic; flagellum brown, the joints, except the conical last joint, all wider than long. Head transverse, very little wider than the thorax, antereo-posteriorly not very thick, flat behind the eyes; viewed from in front almost round, not longer than wide, the frons with a slight antennal impression; eyes large; ocelli subtriangularly arranged, the lateral closer to the margin of the eye than to the front ocellus; mandibles ferruginous; antennæ inserted a little below the middle of the face. Thorax a little more than twice as long as wide, the parapsidal furrows distinct, but not deep or sharply defined; scutellum convex, longer than wide, rounded posteriorly, the axillæ a little nearer to each other than their width at base; metanotum very short, without a median carina, the spiracles very minute, round. Wings hyaline, the veins brownish yellow, the postmarginal vein twice as long as the stigmal, the marginal vein one-half longer than the postmarginal. Abdomen short, subcompressed, viewed laterally it appears nearly as deep dorso-ventrally as it is long, the first body segment is fully two-thirds as long as the whole abdomen, the second segment as long as the third and fourth united, the fourth being longer than the third, while the following segments are short.

Described from several ♀ specimens, reared by Dr. A. Davidson, from the cells of a bee, *Anthihium consimile*.

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## DESCRIPTIONS OF NEW SPECIES OF NOCTUIDÆ.

By JOHN B. SMITH, Sc.D.

(Continued from vol. vi, p. 340.)

**Acronycta pyralis** n. sp. Pl. xv, fig. 1.*—Ground color a very dark powdery gray; head and thorax without distinct markings, but the tip of the collar grayish and the patagiæ indefinitely black margined. The pri-

* The references are all to Plate XV in the December number of Volume VI.

maries have all the ordinary maculation evident, but not sharply defined. Basal line single, black, and marked on the costa only. T. a. line nearly upright, outcurved between the veins, black, preceded by a few pale scales. T. p. line widely outcurved over the cell and a little incurved below, usually remote from the center of the wing; black in color, lunate between the veins and followed by a paler gray shade. S. t. line obscure, and marked only by an irregular and incomplete preceding dark shade. There is a series of blackish terminal lunules and a very evident, blackish, somewhat diffuse shade across the median space close to and parallel with the t. p. line, somewhat obscuring the reniform. Orbicular large, oval, obscurely defined by black scales, with or without a dark central spot. Reniform broad, upright, a little incurved; outwardly a little paler than the ground color, but inferiorly obscured by the median shade. Secondaries smoky, with an indefinite extra-median line and pale fringes. Beneath, smoky and powdery; both wings with an outer line. Expands 31–34 mm.; 1.24–1.36 inches.

*Hab.*—Calgary, July 13.

Two specimens, both females, were sent me by Mr. Dod under the number 31, and this is said to represent his stock. The species is the darkest of all those known to me, resembling *lithospila* in this respect, but quite different in markings.

**Hadena (Xylophasia) versuta** n. sp. Pl. xv, fig. 14.—Ground color dull, dirty, blackish gray; the surface rough and powdery. The head is somewhat paler; the collar gray tipped, and with an indistinct dusky central line. The primaries have all the ordinary marking, but all obscure and indistinct. Basal line geminate, blackish, marked by a little incurve to the base. T. a. line geminate, the defining line scarcely contrasting; as a whole outcurved and only a little irregular. T. p. line geminate, the inner defining line made up of a black or blackish lunules, the outer line even and only a little darker gray; as a whole, nearly parallel with the outer margin. S. t. line formed of white scales, more or less broken, but forming an obvious **W**, on veins 3 and 4. There is a series of black terminal lunules, and the dark fringes are pale spotted on the veins. Beyond the t. p. line the s. t. space is a little paler, shading however to the same dull gray color before the s. t. line. Ordinary spots obscure, but all traceable. Claviform outlined by black scales and with a narrow streak extending from it to the t. p. line. Orbicular large, defined only at the sides, and a little paler in the center. Reniform also very large and incompletely defined, paler powdered through the center. Secondaries whitish, semi-transparent towards the base, more smoky outwardly. There is an obscure discal lunule, and the veins are dark marked. On the underside the wings are powdery gray, the secondaries with a discal lunule and a vague outer shade. Expands 40 mm.; 1.60 inches.

*Hab.*—Calgary, June 26 and July 2 "at Treacle."

Mr. Dod sent me two females and said they were the only ones taken in 1894. Both specimens are females, and represent an obscure species which I had previously seen, but had been afraid to name from lack of sufficient material. I now believe it to be a good one, and finds its allies near *centralis*, though it bears at first sight the appearance of a very much faded and poor *castanea*. There are several species belonging near the present, that yet remain to be described, and three of them at least are in my own collection at the present time.

**Hadena (Xylophasia) contradicta** n. sp. Pl. xv, fig. 13.—Ground color a rich, rusty, red-brown. Head and thorax immaculate. The primaries have the median and terminal spaces like the thorax, of the darker ground color, while the basal and subterminal spaces are distinctly paler, with a more yellowish cast, and the wings are thus somewhat contrastingly colored. The ordinary lines are all distinct. Basal line black, with a little inward loop to the base of the wing, above the submedian vein. T. a. line broad, black, a little irregular, outwardly oblique, but a trifle curved; preceded inwardly by a somewhat marked paler shade. T. p. line distinct, black, even, abruptly outcurved over the cell, and then evenly oblique to the hind margin. S. t. line irregular, marked by a following dusky shade, which becomes more prominent and broader, acutely indenting the line opposite veins 2 and 5. Through this space the veins are black marked, while preceding the dusky shade there is a distinct paler line. There is a series of small, dusky, terminal lunules, and the fringes are dark cut in the interspaces. Claviform very small and pale, very narrowly blackish ringed. Orbicular round or nearly so, without distinct defining line, and of the pale ground color. The same may be said of the reniform, which is of moderate size and upright; only a little kidney-shaped. A fairly distinct median shade crosses the median space outwardly, closely margining the inner edge of the reniform, and from that point running parallel and close to the t. p. line. Secondaries pale, whitish with a reddish suffusion, which becomes quite marked in the fringes. There is a distinct, blackish, extra-median line, and the terminal shading as well as a small discal lunule. Beneath, the wings are reddish powdered; the primaries a litle dusky centrally and both wings crossed by a very prominent, black, outer line. Expands 42 mm.; 1.68 inches.

*Hab.*—Calgary, June 22, "Treacle."

Mr. Dod says this is a unique, and it certainly is a very pretty species and different from anything that I have seen. It is best placed in the group *vultuosa*, but has some affinity with the next, or *finitima* group. It is, however, more broadly and contrastingly colored than any other species in this series, and should, therefore, be rather easily recognizable.

**Homohadena stabilis** n. sp. Pl. xv, fig. 15.—Ground color obscure red-brown, with a smoky suffusion. Collar tipped with pale gray; otherwise the head and thorax immaculate. On the primaries the median lines are present, narrow, a little darker brown, not distinct in any specimen seen and sometimes almost obsolete. T. a. line slightly outcurved in one specimen, a little angulated inwardly at the center. T. p. line rather broadly outcurved over the cell, and only a little incurved below that point. It is a little relieved in some specimens by a faintly paler shade. S. t. line wanting. There is no distinct terminal line; though there is a slight darkening at the base of the fringes. Secondaries dull, smoky brown, without markings of any kind, but the fringes are paler. Underside uniform, dull, smoky brown, a little paler toward the base. The ordinary spots on the upperside are vaguely traceable in some specimens, but usually wanting. Expands 27–32 mm.; 1.08–1.28 inches.

*Hab.*—Calgary, in July.

Mr. Dod sent me five specimens representing both sexes, all in good condition except the one from which the figure was made. This was used, because it was mounted on a low pin like the other specimens photographed, and will serve only to give the general outline. It seems not uncommon, and besides the specimens sent me, I have seen a number of others sent to the late Mr. Neumoegen. The insect belongs with *figurata* in the synopsis, but differs from it by not having the median lines connected and being much more obscure in color. There should be no difficulty in recognizing this simply marked form.

**Deva trabea** n. sp. Pl. xv, fig. 16.—Ground color a pale whitish gray, overlaid by ocherous, golden and silver scales. Head and thorax pale, but the scales and hair are black and brown tipped, forming on the patagiæ margining lines. Tuftings prominent, the vestiture entirely loose and divergent. The wings are mottled, difficult to describe, but all the ordinary markings are present. Basal space more or less silvery, crossed by a yellow-brown basal line, that is single and outwardly limited by the geminate t. a. line. This line is silvery, margined on each side with yellow-brown, and as a whole rather evenly outcurved. T. p. line geminate, the defining brown lines distinct, the included space silver gilt. As a whole the course of the line is parallel with the outer margin, but it is irregular and more or less incurved between the veins, or angulated. There is a distinct, brown, median shade line, extending almost through the center of the wing, and parallel with the outer margin. S. t. line marked by the difference in shade between the s. t. and the terminal spaces. Terminal space very gray, and this invades the s. t. space in the costal region, where the line is marked only by a small costal spot. Opposite the cell there are two brown dashes, below which the s. t. space is darker than the terminal space, though paler than the center of the wing.

Blackish, scale powderings cover the surface throughout, but are most prominent in the paler parts of the wing. There is a continuous, brown, terminal line. The orbicular is round, broadly ringed with silver, and the center is somewhat gilded. Below this spot is a **U**-shaped mark, broadly silver margined and centered with the ground color. The reniform is obscure, scarcely outlined, and so nearly like the ground color that it is recognizable only on close examination. Secondaries whitish with a smoky suffusion and somewhat iridescent. Fringes whitish, set off by a continuous, blackish, terminal line. On the underside the wing is whitish, powdered with gray, and on both pairs there is a more or less obvious median line and a subterminal shade; also a continuous, blackish, terminal line. Expands 39 mm.; 1.56 inches.

*Hab.*—Calgary, 1894.

The specimen is numbered 20, and is said by Mr. Dod to be unique. The species is a strongly marked one, quite different in character from those heretofore described, and it agrees with them in the enormously long palpi which project for half their length above the vertex.

**Plusia insolita** n sp. Pl. xv, fig. 17.—Ground color a rich golden brown with metallic reflections. Head uniform, rusty brown in color. Collar is tipped with bluish gray, beneath which is a rusty brown band, inferiorly margined by another gray line, and the lowest portion is yet paler; more grayish. Thoracic vestiture gray tipped, the usual tuftings prominent. Abdominal tuftings also well marked, prominent, and brown. Taken as a whole the primaries have a brown base, velvety in parts, and with golden reflections when turned obliquely to the light. Along the costa and in the basal space is a suffusion of lilac gray scales, and beyond the t. p. line is a broad lilac band. In the terminal space are other lilac shadings. Below the silvery mark, which extends through the median space, is a yellowish streak, broadest at the t. p. line. Basal line silver gilt, preceded by a few black scales, and joining the base in the submedian interspace. T. a. line silver gilt, followed by black scales and preceded by golden brown. It is outwardly bent from the costa, touches the orbicular, and is then inwardly oblique, reaching the hind margin very close to the base. T. p. line yellowish, a little silvered, preceded and followed by narrow, brown, defining lines. It is acutely angulated on the costa, then evenly oblique inwardly to the silver mark, where it makes an abrupt angle over the submedian vein, and is thence evenly oblique to the inner margin. S. t. line very irregularly sinuate, with a broad outward tooth nearly opposite the middle of the outer margin. There is a narrow, terminal, brown line, and a slender line through the fringes. The ordinary spots are fairly evident; the orbicular elongated, oval, decumbent, deep brown, with a slender silver outline, and it rests upon the beginning of the silvery mark which extends from that point in the form of two lines which unite

before they reach the angle of the t. p. line. The reniform is narrow, oblique, faintly outlined by silver gilt scales outwardly, black shaded, but this shading crossed by the gilded veins. Secondaries of the usual smoky color, with a yellowish tint, as is also the underside. There is a vague paler line through the secondaries, and the wings are dusky outwardly. Expands 35-40 mm.; 1.40-1.60 inches.

*Hab.*—Calgary, in 1894.

Two specimens, both females, were sent me by Mr. Dod, who says "they are rare." The species of *Plusia* are difficult to describe, and a reference to figure 17 will be perhaps more satisfactory than the description. The species is unlike any known to me, and I cannot identify it with the descriptions of any species not in my collection.

**Neuronia americana** Smith.

It was quite a surprise to me to receive a specimen of this insect, numbered 61, and marked Calgary, Aug. 28, 1894. It is a female, larger than the specimens I had seen before, and expands 37 mm. or 1.50 inches. Mr. Dod writes concerning it, "rather common at light August, '94."

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THOSE who recognized General Count "Dejeau" and "the late Joseph O. Westwood" in the NEWS for November last, in spite of their disguises, may have read, with some amusement, in the same number (p. 302) certain statements attributed to me, likewise in disguise, regarding Malpighian "tubercles" without recalling that the proper term was employed in a paper in the NEWS for June, 1895, p. 181.—PHILIP P. CALVERT, Berlin, Germany, Dec. 16, 1895.

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## OBITUARY.

Monsieur EMILE LOUIS RAGONOT, Président de la Société Entomologique de France, Officier D'Académie.—It was with feelings of the most profound sorrow that I received quite recently a letter deeply bordered with black announcing the sad departure from this life of Mons. Emile Louis Ragonot, the distinguished President of the Entomological Society of France, one of the most widely known and accomplished entomologists of the latter half of this century. Mons. Ragonot died at his home, No. 12 Quai de la Rapée, on October 13, in the fifty-third year of his age.

My departed friend will be known forever in the annals of entomological science as the most accomplished and faithful student of the Phycitidæ and Pyralidæ, who has appeared upon French soil during the present

century. His labors have been extensive and various, but they find their crown in the magnificent Monograph of the Phycitinæ of the World, the first portion of which comprises the seventh volume of the "Mémoires sur les Lépidopteres," which are being edited and published by His Imperial Highness, the Grand Duke Nicholas, of Russia. The second volume was in course of preparation at the time when death overtook the indefatigable laborer, but it is hoped that the work is so well advanced that it may be brought to a successful and worthy completion, even without the guiding hand and controling mind of the distinguished author. Monsieur Ragonot was a banker, possessed of the means to enable him to prosecute his researches widely and thoroughly. He had succeeded in bringing together one of the most important and complete collections representing his favorite groups which is in existence, and his well-known reputation for strict probity and scientific ability led to his being entrusted with the treasures of most of the private and public collections of both hemispheres in order to facilitate his labors upon the monumental work which he had undertaken.

In early life he had been actively engaged in business in the city of London, having resided there for many years. In consequence he was a perfect master of the English tongue, and some of his friends have been in the habit of regarding him as more typically English than French in his style of thought. No one corresponding with him in English would have imagined from the style of his letters that he was other than English, so pure was the idiom and so genuinely English was the style. But he was as intensely French as he was English, and no one familiar with the pleasant life of his home, can fail to remember it as a typical French household, full of the brightness and vivacity which characterize the life of that people.

In person, Monsieur Ragonot was of an engaging presence, modest, affable, earnest, yet never so deeply engaged in the absorbing duties of his calling, or the favorite recreations of his study, as to fail to have a moment for the interchange of quiet pleasantries. Bright, quick, precise in speech, instantly ready to grasp an idea, it was a thorough pleasure to be thrown, if even for only a short time, into his society. In his death science has lost one of its leaders.

W. J. HOLLAND.

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ENTOMOLOGICAL NEWS for December, was mailed November 30, 1895.